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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/023,651 | 12/21/2001 | Yutaka Kaneda | 111426 | 6403 |

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EXAMINER

PATEL, ISHWARBHAI B

ART UNIT PAPER NUMBER

2827

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/023,651

Applicant(s)

KANEDA, YUTAKA

Examiner

Ishwar (I. B.) Patel

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 1,6,7,10,11 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-5,8,9,12-14,16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of group II, claims 2-17, in Paper No. 5 is acknowledged.

Further, specie I, claims 2-5, 8, 9, 12-14 and 16 and 17, reading on figure 1-2, is elected (see interview summary).

The traversal is on the ground(s) that subject matter of both the group is sufficiently related and a thorough search for the subject matter of any one group of claims would encompass a search for the subject matter of the remaining claims.

This is not found persuasive because both the product and method groups are classified in different class / subclass and a thorough search for the entire application will add additional burden. Further, mutually exclusive embodiments comprising the species add additional burden.

The requirement is still deemed proper and is therefore made FINAL.

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The specification to which the oath or declaration is directed has not been adequately identified. See MPEP § 601.01(a). Neither of the boxes, "a" and "b",

are checked.

Further, the submitted copy of the declaration is too dark to read as the characters are joined together.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The word "film-like" used for describing the insulating substrate is vague. It does not clearly describe the structure.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 2, 4, 13 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Zimmerman, US Patent No. 4,048,438.

Regarding claim 2, Zimmerman discloses a flexible wiring board comprising a wiring pattern formed of a desired metal on a film-like insulating substrate (conductive pattern on a flexible substrate 10 with lead fingers 16, see figure 1, column 3, line 54-67), wherein,

a reinforcing guide pattern having same material as that of the wiring pattern is formed on the insulating substrate (conductor pattern 14, see figure 1, column 3, line 54-67).

Regarding claim 4, the flexible wiring board of Zimmerman further discloses the guide pattern formed as a frame shape surrounding the periphery of the wiring pattern (pattern 14, see figure 1).

Regarding claim 13, the flexible wiring board of Zimmerman further discloses the flat electrodes, see figure 2.

Regarding claim 17, the flexible wiring board of Zimmerman further discloses the reinforcing guiding pattern formed integral with the wiring pattern on the insulating substrate (see figure 1).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3, 5, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman, US Patent No. 4,048,438, as applied to claim 2,4, 13 and 17 above, and further in view of Tsukamoto, US Patent No. 5,841,194.

Regarding claim 3, the applicant is claiming the guide pattern with a projecting reinforcing guide having a thickness greater than that of the wiring pattern.

Though, Zimmerman does not disclose such guide pattern with a projecting reinforcing guide having a thickness greater than that of the wiring pattern, as disclosed by Tsukamoto, it is known in the art to have the guide frame thicker than the wiring pattern, to have necessary strength required for better handling of the assembly and to avoid damage to the wiring patterns.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the substrate of Zimmerman with guide pattern with a projecting reinforcing guide having a thickness greater than that of the wiring pattern, as taught by Tsukamoto, in order to avoid the damage during handling and assembly.

Regarding claim 5, the modified circuit board of Zimmerman further discloses the guide pattern formed as a frame shape surrounding the periphery of the wiring pattern; see Zimmerman figure 1 and Tsukamoto figure 1 and 2.

Regarding claims 8 and 9, though the modified circuit board of Zimmerman does not disclose the guide holes on guide patterns. It is known in the art to provide guide hole / registration hole for locating the component or element in or on the circuit board. Zimmerman discloses registration hole on the substrate, instead of the guide frame, however the important consideration is to provide a guide / registration hole. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the modified circuit board of Zimmerman with the guide hole on the guide pattern, apparently in order to locate the component or element in or on the circuit board.

9. Claims 13, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Zimmerman, US Patent No. 4,048,438, and Tsukamoto, US Patent No. 5,841,194 as applied to claims 2-5 and 8-9 above, and further in view of Beck, US Patent No. 3,466,206.

Regarding claims 13, the applicant is claiming projecting electrodes. Though the modified circuit board of Zimmerman does not disclose the projecting electrode, as

disclosed by Beck, it is known in the art to have projected electrode depending upon the required spacing between the component and the substrate.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the modified circuit board of Zimmerman with projecting electrodes in order to have desired spacing between the component and the substrate surface.

Regarding claims 14 and 16, the combination of Zimmerman, Tsukamoto and Beck further disclose the second wiring pattern on the opposite side of the insulating substrate with flat electrodes.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Miyake et al., and Fernandez disclose flexible wiring board with the wiring pattern formed on the insulating substrate.

Barrett et al., disclose a guiding pattern on perimeter portion.

Sheppard et al., disclose a stiffener ring around the circuit patterns.

Shinohara discloses a guiding frame around the terminals.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar (I. B.) Patel whose telephone number is (703) 305 2617. The examiner can normally be reached on M-F (8:30 - 6) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L Talbott can be reached on (703) 305 9883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3431 for regular communications and (703) 305 7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

ibp
February 23, 2003



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